

$^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  **1974Bi04**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, J. E. Purcell and C. G. Sheu		NP A968, 71 (2017)	1-Jan-2017

- 1971Da33:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=30 MeV, measured  $\sigma(\theta)$ . Deduced optical model parameters.
- 1972Ba52:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=28 MeV, measured  $\sigma(\theta)$ . Deduced optical potentials.
- 1972Po07:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=4.5-13 MeV, measured  $\sigma(E, \theta)$ . Deduced optical model parameters.
- 1972St34:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=30 MeV, analyzed  $\sigma(\theta)$ .
- 1973Sc26:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li}), ({}^6\text{Li}, {}^6\text{Li}')$  E=34,36 MeV, measured  $\sigma(\theta)$ . Deduced optical model parameters, FRDWBA analysis.
- 1974Bi04:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li}), ({}^6\text{Li}, {}^6\text{Li}')$  E=36.4,40.0 MeV, measured  $\sigma(\theta)$ . Deduced optical-model parameters, DWBA analysis.  $^{12}\text{C}$  level deduced deformation parameters  $\beta(L)$ .
- 1976Ch27:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=50.6 MeV, measured  $\sigma(\theta)$ . Deduced optical model parameters.
- 1976Po02:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=4-13 MeV, measured  $\sigma(E, \theta)$ . Deduced optical potential.
- 1976We10:  $^{12}\text{C}(\text{pol. } {}^6\text{Li}, {}^6\text{Li})$  E=20,22.8 MeV, measured  $\sigma(\theta)$ , analyzing power  $A(\theta)$ .
- 1978Dr07:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=9 MeV, measured  $\sigma(\theta)$ .
- 1978Me14:  $^{12}\text{C}(\text{pol. } {}^6\text{Li}, {}^6\text{Li})$  E=22.8 MeV, measured  $\sigma(\theta), A(\theta)$ .
- 1980Fu06:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li}), ({}^6\text{Li}, {}^6\text{Li}')$  E=20-36 MeV, measured  $\sigma(E({}^6\text{Li}), \theta)$ . Deduced No evidence for resonant two-step  $\alpha$ -exchange mechanism.
- 1981Gi03:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=90 MeV, measured  $\sigma(\theta)$ .
- 1981Sc16:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=99 MeV, measured  $\sigma(\theta)$ .
- 1982Co19:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=156 MeV, analyzed  $\sigma(\theta)$ . Deduced potential form dependence.
- 1983Ru09:  $^{12}\text{C}(\text{pol. } {}^6\text{Li}, {}^6\text{Li})$  E=9, 19.2 MeV, measured iT<sub>11</sub>(θ),  $\sigma(\theta)$ , ratio to  $\sigma(\text{Rutherford})$  vs  $(\theta)$ , T<sub>20</sub>(θ).
- 1984Vi02:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=24,30 MeV, measured  $\sigma(\theta)$ . Deduced optical model parameters.
- 1985Cu04:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li}), ({}^6\text{Li}, {}^6\text{Li}')$  E=34 MeV, measured  $\sigma(\theta)$ . Deduced reaction mechanism.
- 1987Ta21:  $^{12}\text{C}(\text{pol. } {}^6\text{Li}, {}^6\text{Li})$  E=150 MeV, measured  $\sigma(\theta), A_Y$ . Deduced iT<sub>11</sub>(θ).
- 1988Ka09:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li}), ({}^6\text{Li}, {}^6\text{Li}')$  E=123.5,168.6 MeV, measured  $\sigma(\theta)$ . Deduced reaction mechanism.
- 1988Na02:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=210 MeV, measured  $\sigma(\theta)$ . Optical model.
- 1988Ta08:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=150 MeV, measured  $\sigma(\theta)$  asymmetry. Deduced iT<sub>11</sub>(θ).
- 1989De34:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=90-93 MeV, measured  $\sigma(\theta)$ . Deduced potential parameters. DWBA.
- 1989Gi01:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=158 MeV, measured  ${}^6\text{Li}$  spectra.
- 1989Va04:  $^{12}\text{C}(\text{pol. } {}^6\text{Li}, {}^6\text{Li})$  E=30 MeV, measured  $\sigma(\theta)$ , analyzing power vs  $\theta$ . Deduced reaction mechanism, model parameters.
- 1990Sa05:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=30.6 MeV, analyzed  $\sigma(\theta)$ . Deduced model parameters.
- 1990Tr02:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=20,50 MeV, measured  $\sigma(\theta)$ . Deduced optical model parameters.
- 1993Na01, 1994Na03:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=35,53 MeV/nucleon, measured  $\sigma(\theta)$ , folding model analysis with M3Y interaction.
- 1994Re01:  $^{12}\text{C}(\text{pol. } {}^6\text{Li}, {}^6\text{Li})$  E=30 MeV, measured  $\sigma(\theta)$ , vector, tensor analyzing power vs  $\theta$ . Deduced model parameters, tensor potential need.  $^{12}\text{C}$  levels deduced deformation lengths.
- 1995Ca26:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li}), ({}^6\text{Li}, {}^6\text{Li}')$  E<sub>c.m.</sub>=2-16 MeV, measured  $\sigma(\theta)$  vs E.  $^{12}\text{C}$  levels deduced deformation lengths. DWBA.
- 1995Ke10:  $^{12}\text{C}(\text{pol. } {}^6\text{Li}, {}^6\text{Li})$  E=30,50 MeV, measured  $\sigma(\theta)$ , analyzing powers. Deduced optical model parameters.
- 1996Ga29:  $^{12}\text{C}(\text{pol. } {}^6\text{Li}, {}^6\text{Li}), (\text{pol. } {}^6\text{Li}, {}^6\text{Li}')$  E=30 MeV, measured  $\sigma(\theta)$ , recoil  $^{12}\text{C}$  spectra, vector analyzing powers.
- 1996Ke09:  $^{12}\text{C}(\text{pol. } {}^6\text{Li}, {}^6\text{Li}), (\text{pol. } {}^6\text{Li}, {}^6\text{Li}')$  E=30,50 MeV, measured iT<sub>11</sub>(θ), T<sub>20</sub>(θ), T<sub>21</sub>(θ), T<sub>22</sub>(θ),  $\sigma(\theta)$ . Deduced optical model parameters.  $^{12}\text{C}$  levels deduced deformation length parameters.
- 2000Sc11:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=600 MeV, measured elastic and breakup  $\sigma(\theta)$ , particle spectra.
- 2004Ca46:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=54,63,130 MeV, measured  $\sigma(\theta)$ . Deduced model parameters, refractive effects.
- 2004MaZR, 2005MaZK:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=63 MeV, measured elastic, inelastic  $\sigma(\theta)$ .
- 2005Mb12:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li}), ({}^6\text{Li}, {}^6\text{Li}')$  E=63 MeV, measured  $\sigma(\theta)$ .
- 2008Ke06:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=35 MeV/nucleon, calculated  $\sigma, \sigma(\theta)$ . Coupled reaction channel calculations (CDCC).
- 2009Da22:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li}), ({}^6\text{Li}, {}^6\text{Li}')$  E=124,169 MeV, analyzed elastic and inelastic scattering cross section and  $\sigma(\theta)$  data using diffraction model of scattering; deduced nuclear rms radii for excited states in  $^{12}\text{C}$ .
- 2011Ba25:  $^{12}\text{C}({}^6\text{Li}, {}^6\text{Li})$  E=12.3 MeV, measured particle spectra, tof,  $\sigma(\theta)$ .

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 $^{12}\text{C}(^6\text{Li}, ^6\text{Li})$     **1974Bi04 (continued)**

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 $^{12}\text{C}$  LevelsE(level)<sup>†</sup>

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4.4×10<sup>3</sup>  
7.7×10<sup>3</sup>  
9.6×10<sup>3</sup>  
10.8×10<sup>3</sup>  
11.8×10<sup>3</sup>  
12.7×10<sup>3</sup>  
13.4×10<sup>3</sup>  
14.1×10<sup>3</sup>

<sup>†</sup> From (1974Bi04).